IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:	DE MEUTER et al.	Confirmation:	1058
Serial No.:	10/509,835	Art Unit:	1794
Filed:	September 30, 2004	Examiner:	N. Dees
For:	Sugar-free hard coatings prepared from liquid maltitol comprising DP_{4+}fraction		

REQUEST FOR RECONSIDERATION

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

June 19, 2009

Sir:

The following is responsive to the Office Action mailed March 19, 2009, in the above-identified application.

Applicants courteously solicit favorable reconsideration and allowance with respect to all claims.

Applicants present claims 1, 2, 5, 6, and 9-16 for further examination.

A. Applicants submit that claims 1, 2 and 9-14 define novel and unobvious inventions over the combination of U.S. Patent No. 4,840,797 (Boursier) in view of U.S. Patent No. 4,849,023 (Devos) when taken with newly cited U.S. Patent No. 5,470,591 (Ribadeau-Dumas).

In addition to previous arguments presented, which are incorporated herein by reference, Applicants submit that claims 1, 2, and 9-14 would not have been obvious to one of ordinary skill in the art in view of Boursier, even if Boursier were combined with Devos.

Applicants again also respectfully submit that Ribadeau-Dumas effectively teaches away from the present invention. Since Ribadeau-Dumas affirmatively teaches away from the present invention, it is courteously suggested that the obviousness rejection over the trio of references be favorably reconsidered and withdrawn.

1. Boursier does not describe, nor would it have suggested, the claimed inventions.

Applicant submits that Boursier neither describes nor suggests the claimed inventions.

Applicants' Claim 1 recites "dry matter content of the syrup is from 68 - 72%." That what Boursier said would not work!

Applicants' specification discloses for those skilled in the art that according to Boursier:

> EP 0 201 412 [= cited Boursier]describes a maltol syrup which is consisting of 97.1% by weight of maltol, 1.1% by weight of sorbitol and 1.8% by weight of maltotrietol. ***Said syrup is devoid of any DP_{4+} fraction, and it is clearly demonstrated that it is not possible to obtain a regular surface when applying the maltol syrup at a dry substance content higher than 65%. In cases where higher drier substance is used, the crystallization is irregular and defects on the surface appear.***

Specification, page 3, penultimate paragraph, emphasis added; see also Boursier at column 8, lines 19-21.

Indeed, Applicants' specification, which was verified with the oath and declaration, includes the evidentiary summation:

> Surprisingly, the current invention demonstrates that maltitol syrups containing from 0.7-1.5% DP_{4+} on dry matter content, and from 95-97% maltitol on dry matter content, are suitable to use syrups at a dry substance

higher than 65%, i.e. at dry substance of 68-72% and yet regular hard coatings are obtained (see FIG. 1). Preferably, maltitol syrups having a dry matter content from 70-72%, result in a ***hard coating with a homogeneous surface.***

Specifically, Boursier indicates the patent relates to a confectionery or pharmaceutical product with sugarless coating obtained by hard coating (col. 1, line 7). Further, Boursier specifies that the dry substance matter of the maltitol syrup is from 50-70%. For example, Bousier, provides an example of proven satisfactory maltitol having the following composition:

Maltitol: 97.1 %
Sorbitol: 1.1 %
Maltotriitol: 1.8% by weight.
(col. 2, line 53)

It is noted that in this composition, there is no room for allowing any further component. The composition consists of these three products, yet it has proven satisfying.

Further, Bousier indicates the hard coating may show a smooth surface that is essentially free from imperfections and is stable. (Col. 3, line 45). However, additional disclosure of the specification makes it clear the hard coating ***may show*** a smooth surface that is essentially free from imperfections and is stable, but this is not an absolute. Thus, certain criteria must be fulfilled in order to obtain satisfactory results. Bousier further confirms the actual composition of the maltitol syrup, which essentially consists of maltitol and has a certain sorbitol and maltotriitol content (Col. 4, line 44).

Bousier describes the importance of the actual content of maltitol. The maltitol richness is described as between 92% to 97% and only with a maltitol content of 96% and 97%, are the coatings obtained that are quite correct, the crystallization of maltitol is achieved

regularly and requires only a slightly greater drying time in the case of the syrup with 96% richness. (Col. 5, line 35) It is known in the art that syrups with 95% and 92% richness, the chewing gums have a tendency to stick together, crystallization is difficult, and the drying times are long.

In contrast, the current invention, as claimed in claim 2, explicitly includes syrups with a maltitol content of 95%, yet none of these defects are observed.

Further, Boursier describes the effect of the dry matter content. Different dry matter contents of from 45-70% have been evaluated. (col. 5, line 63). As clearly shown (Col. 6, line 19), dry matter contents beyond 65% show irregular crystallization and surface defects appear.

Boursier teaches away from the Claim 1 recital "dry matter content of the syrup is from 68 - 72%," which Boursier sid would show irregular crystallization and surface defects.

Column 6, line 50, further indicates Boursier further analyzed the influence of the temperature of the bed.

Thus, although stated in Boursier (col. 3, line 45), that the hard coating may show a smooth surface essentially free from imperfections and being stable, these results are explicitly not obtained when one deviates from the specific features according to Boursier.

Further, there is no indication that one would be encouraged to go for a high dry substance or make sure that other byproducts, such as DP4+, are present in the maltitol syrup. Actually, the cited prior art instead focused on a lower dry substance of the maltitol syrup and higher purity (higher content of maltitol) of the syrup.

In summary, Boursier shows it is better to use high purity maltitol syrup at a low dry substance, and this may result in a smooth surface that is essentially free of imperfections. This finding does not teach the use of a syrup that contains different impurities.

As to the other cited art, Devos discloses the availability of a maltitol syrup containing DP4+ byproducts. Specifically, Devos cites the syrup contains from 87-97.5% maltitol and less than 1% of maltotetraitol and hydrogenated products of a higher molecular weight. (Col. 4, line 24). Devos also specifies that the dry matter is higher than 65%. (Col. 4, line 43)

It is known, that this type of syrup can be applied for its sweetening effect (see col. 5, line 38). However, Boursier shows it would be unreasonable to use the syrup of Devos. The purity of the maltitol is not adequate, the dry matter content is too high, and there is no reason to assume at the outset that the presence of DP4+ would solve all the technical problems encountered. Thus there would be no suggestions to combine these two references.

Applicnts' evidentiary showing is consistent with the results and is illustrated in FIG. 1. FIG. 1 is a photograph with magnification of 6 x 10. The photograph shows that the hard coating prepared with the liquid maltol syrup of 96% maltol and 0.7-1.5% by weight of DP_{4+} based on dry matter yields a smooth regular surface.

Thus, once Applicants demonstrated that DP4+ can overcome the matters shown to be problematic in Boursier (U.S. Patent No. 4,840,797), it might seem in retrospect simple, but that is just based on hindsight once the results are reported.

In short, one of ordinary skill in the art would not have been encouraged by the knowledge of both references to combine their disclosures, nor would such a combination arrive at Applicants' claimed invention.

As for the third reference cited in the present action, Ribadeau-Dumas, it describes an agent for controlling the propagation of crystallization. (col. 4, line 35). Ribadeau-Dumas, indicates about 3-19% of molecules have a molecular weight greater than 1300 Daltons, which are used as the agent for controlling the propagation of crystallization. (col. 5, line 1)

In contrast, the present invention claims products having a DP of 7-8. Claim 1 describes a product containing from 0.7-1.5% DP4+. It should be clear that the current invention claims a different fraction and in much lower quantities.

Combining the disclosure of Boursier and Ribadeau-Dumas eventually would require high quantities of a DP7+ fraction, which would be contra indicted by the results in Boursier.

In summary, Applicants submit there is no practical way in which Applicants' present claim 1 can be shown to have been obvious in view of the disclosures of the three applied references, alone or in any combination. Similarly, the dependent claims should be considered unobvious for at least these same reasons.

An Examiner's Declaration is respectfully requested that supplies the facts not apparent from the references cited, if the rejection is not favorably reconsidered and withdrawn. This request is particularly appropriate because the Boursier reference teaches away from claim 1. If the rejection is to be maintained, a factual predicate for the combination of references must be supplied,

Applicants have a full and fair opportunity to respond and Applicants respectfully additionally submit a factual predicate must be presented for modifying the references per the Office Action. Otherwise, Applicants courteously solicit favorable reconsideration and an allowance.

However, Applicants respectfully submit the rejection founders on because: (a) the first two references are divergent, and at least one teaches away from the very thesis advocated in the Office Action; and (b) the third reference teaches away from the claimed inventions such that it suggests the first two references would not have been combined as hypothesized in the Office Action.

B. Applicants submit that claims 5-6, 15-16 define novel and unobvious inventions over the combination of U.S. Patent No. 6,558,722 (Corriveau et al.) in view of U.S. Patent No. 4,849,023 (Devos).

Similarly, Applicants courteously but earnestly submit claims 5-6, and 15-16 also define unobvious inventions over the Corriveau reference taken in view of the Devos reference. The present process, as claimed, is inventive through the use of an inventive maltitol syrup for this particular application. As such, Applicants request removal of the rejection of these claims for at least these reasons.

C. Conclusion

Applicants submit that there would have been no reasonable expectation of success even if a person of ordinary skill in the art had undertaken the statutorily proscribed hindsight - retrospective analysis - detailed in the present Office Action. Even if the hindsight guided retrospective analysis were appropriate, which it is not (as seen from the statutory command in 35 U.S.C. §103(a)), the

specification herein details the evidentiary basis that refutes the result postulated in the Office Action, *i.e.*, shows at the very least that the approach would not have been expected to be successful.

Accordingly, reconsideration and withdrawal of this rejection is courteously but earnestly solicited. If there are any questions, the Examiner is invited to contact the undersigned if there are any questions.

Fees

Applicants petition to have their IDS of 11 June 2009 considered on the merits, and authorize the Commissioner to charge the IDS fee therefor to deposit account 06-1135 regarding our order number 7393/84118.

To the extent necessary during prosecution, Applicants hereby request any required extension of time not otherwise requested and hereby authorize the Commissioner to charge any unintentionally omitted fee, especially those required to maintain pendency of the present application, including application processing, extension, extra claims, statutory disclaimer, issue, and publication fees, to Deposit Account No. 06-1135.

Respectfully submitted,

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